

What is claimed is;

1. An image-capturing device comprising:

a first image-capturing element that captures an image of a subject and outputs a first image-capturing signal;

5 a second image-capturing element that captures an image of the subject and outputs a second image-capturing signal;

a light source estimating device that estimates a type of light source illuminating the subject based upon said first image-capturing signal output from said first image-

10 capturing element; and

an image processing device that implements image processing on said second image-capturing signal output by said second image-capturing element based upon the light source type estimated by said light source estimating device.

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2. An image-capturing device comprising:

an image-capturing element that captures an image of a subject and outputs an image-capturing signal;

20 a light source estimating device that estimates a type of light source illuminating the subject based upon said image-capturing signal output from said image-capturing element; and

an image processing device that implements image processing on said image-capturing signal output by said image capturing element based upon the light source type

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estimated by said light source estimating device.

3. An image-capturing device comprising:

an image-capturing element that captures a subject
5 image passing through a photographic lens and outputs an
image-capturing signal;

a chromaticity detection device that detects a
chromaticity of the subject;

a light source estimating device that estimates a type
10 of light source illuminating the subject based upon the
chromaticity detected by said chromaticity detection device;

a gain calculating device that calculates a gain by
using color temperature information corresponding to the
light source type estimated by said light source estimating
15 device; and

a gain adjustment device that performs a gain adjustment
by multiplying said image-capturing signal output by said
image-capturing element by the gain calculated by said gain
calculating device.

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4. An image-capturing device according to claim 3,
wherein:

said chromaticity detection device detects the
chromaticity of the subject based upon said image-capturing
25 signal output by said image-capturing element.

5. An image-capturing device according to claim 3,
wherein:

said chromaticity detection device includes a
5 chromaticity detection image-capturing element which is
independent of said image-capturing element and outputs a
chromaticity detection image-capturing signal by capturing
an image of the subject, and detects the chromaticity of the
subject based upon said chromaticity detection image-
10 capturing signal output by said chromaticity detection
image-capturing element.

6. An image-capturing device according to claim 3,
wherein:

15 said light source estimating device estimates the light
source type by selecting a light source type corresponding
to chromaticity information that roughly matches the
chromaticity detected by said chromaticity detection device
among a plurality of sets of chromaticity information
20 provided in advance in correspondence to a plurality of
specific light sources.

7. An image-capturing device according to claim 6,
wherein:

25 said plurality of specific light sources include

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sunlight at a plurality of specific color temperatures and
a plurality of specific types of fluorescent light; and

said chromaticity information is provided discretely
so that each set of chromaticity information indicates a color
5 that is substantially achromatic under illumination with
sunlight at each of the plurality of color temperatures or
with one of the plurality of types of fluorescent light.

8. An image-capturing device according to claim 3, further
10 comprising:

a first brightness level decision-making device that
makes a decision as to whether or not a brightness level in
each of specific areas obtained by dividing a photographic
field is higher than a first predetermined value, wherein:

15 said chromaticity detection device detects the
chromaticity of the subject in each of said specific areas;

said light source estimating device estimates a light
source type among said plurality of types of light sources
for each area determined to manifest a higher brightness level
20 by said first brightness level decision-making device by
using the chromaticity detected in the area and estimates one
type of light source as the light source for the subject based
upon numbers of different light source types estimated in
individual areas; and

25 said gain calculating device calculates an average of

levels of the chromaticity used by said light source
estimating device when estimating one type of light source
as the light source for the subject and calculates the gain
by using color temperature information corresponding to the
5 calculated average.

9. An image-capturing device according to claim 3, further
comprising:

10 a second brightness level decision-making device that
makes a decision as to whether or not a brightness level in
each of specific areas obtained by dividing a photographic
field is higher than a second predetermined value, wherein:

said light source estimating device estimates a light
source type among said plurality of types of light sources
15 for each area determined to manifest a higher brightness level
by said second brightness level decision-making device by
using the chromaticity detected in the area and estimates one
type of sunlight as the light source for the subject based
upon numbers of different light source types estimated in
20 individual areas; and

said gain calculating device calculates an average of
levels of the chromaticity used by said light source
estimating device when estimating one type of sunlight as the
light source for the subject and calculates the gain by using
25 color temperature information corresponding to the

calculated average.

10. An image-capturing device according to claim 9,
wherein:

5 said gain calculating device calculates the gain by
using predetermined specific color temperature information
if said light source estimating device determines that
sunlight at any color temperature is not the light source for
the subject.

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11. An image-capturing device according to claim 3,
wherein:

 said gain calculating device includes an LUT that
outputs the gain by using the light source illuminating the
15 subject and said color temperature information as arguments.

12. An image-capturing device according to claim 6,
wherein:

 said light source estimating device selects
20 chromaticity information to be used from said plurality of
sets of chromaticity information in correspondence to the
brightness level of the subject.

13. An image-capturing device according to claim 7,
25 wherein:

said chromaticity detection device further detects whether or not the subject manifests a green color; and

said light source estimating device does not select fluorescent light as the light source if said means for
5 chromaticity detection detects that the subject manifests a green color.

14. An electronic camera comprising:

an image-capturing element that captures a subject
10 image passing through a photographic lens and outputs an image-capturing signal;

a chromaticity detection device that detects a chromaticity of the subject;

a light source estimating device that estimates a type
15 of light source illuminating the subject based upon the chromaticity detected by said chromaticity detection device;

a gain calculating device that calculates a gain by using color temperature information corresponding to the light source type estimated by said light source estimating
20 device; and

a gain adjustment device that performs a gain adjustment by multiplying said image-capturing signal output by said image-capturing element by the gain calculated by said gain calculating device.

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15. An image processing device comprising:

an image-capturing signal intake unit that obtains an image-capturing signal related to a subject an image of which has been captured by an image-capturing element;

5 a light source estimating unit that estimates a type of light source illuminating the subject based upon the image-capturing signal that has been obtained; and

an image processing unit that implements image processing on the image-capturing signal that has been
10 obtained based upon the light source type estimated by said light source estimating device.

16. A computer-readable computer program product containing an image processing program, said image processing
15 program comprising:

image-capturing signal acquisition instructions for obtaining an image-capturing signal related to a subject an image of which has been captured by an image-capturing element;

20 light source estimate instructions for estimating a type of light source illuminating the subject based upon the image-capturing signal that has been obtained; and

image-processing instructions for implementing image processing on the image-capturing signal that has been
25 obtained based upon the light source type estimated by said

light source estimating device.

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